

CLAIMS

10. (Previously Presented) A method for aggregating, sharing and dynamically routing and allocating bandwidth from a plurality of wired and wireless networks that are geographically disbursed over a wide area, and providing some or all of the aggregated bandwidth to any user on an on-demand basis, the method comprising the steps of:

developing and updating a network table that comprises a list of nearby RCGs, their bandwidth capabilities over local, remote and wireless connections, and their location with respect to a requesting RCG;

determining an optimum amount of bandwidth needed for an immediate data transfer needs of the requesting RCG;

determining which of the nearby RCGs should be contacted for access to unused bandwidth to support a transfer of the requesting RCG, based upon their unused local bandwidth capacity, and a distance and a number of hops between the RCGs and the requesting RCG;

sending a request to the supporting RCGs asking for use of a portion of the unused bandwidth;

receiving responses from the supporting RCGs with information about how much bandwidth each selected RCG can share;

selecting which of the supporting RCGs to use for optimal use of needed bandwidth;

contacting the selected RCGs with control information for sending data to the requesting RCG;

sending packets of the data from the selected RCGs to the requesting RCG;

reassembling the packets of the data at the requesting RCG; and

relinquishing the bandwidth of each of the selected RCGs.

11. (Previously Presented) The method of claim 10, further comprising the step of sending a request to a single supporting RCG that has sufficient unused bandwidth for satisfying the request of the requesting RCG.

12. (Previously Presented) The method of claim 10, wherein each of the supporting RCGs can opt out of bandwidth sharing based upon local demand priority, and wherein local demand for bandwidth supersedes a request of a remote RCG for bandwidth sharing.

13. (Previously Presented) The method of claim 10, further comprising the steps of:
dynamically reallocating shared bandwidth of the supporting RCGs during multi-link data transfers as supporting RCGs opt out of bandwidth sharing due to local bandwidth demands; and
enlisting additional supporting RCGs to provide additional bandwidth.

14. (Previously Presented) The method of claim 10, further comprising the step of scheduling a data transfer to occur at a future date and time based upon at least one of anticipated network bandwidth availability, network congestion, and future notice of availability of the data of interest.